MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, and Domestic and Rural Affairs.

NEW Perfect Agriculture is the foundation of all Trade and Industry.—Liebig. SERIES.

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☞ Our readers may be surprised to learn, that the following article was written by a farmer. Although every farmer may not be able fully to understand the import of the terms employed, no one, we think, with an ordinary share of good common sense, can fail to derive much valuable instruction from its careful perusal. Multitudes of our farmers understand the elements of Geology and Chemistry sufficiently to enable them fully to appreciate its merits, and *all* of them may, with the greatest ease, possess themselves of the requisite knowledge, and thus initiate themselves into the mysteries of the science of production.

From the Boston Cultivator.

Agricultural Science.

The great mountain chains which ridge and furrow the Earth's surface, consist of one and the same material, viz. granite. It is of the oldest or primary formation, it is also one of the hardest and most durable rocks; yet a very great portion of all soils have been derived from the disintegration of granite. Rocks, originally of many tons weight, have been reduced to pebbles—pebbles to sand—sand to impalpable powder.

Granite is composed of three minerals, viz quartz, felspar and mica. Quartz is the very hard flinty part of granite; it is often found alone and pure, and is frequently called rock crystal—white flint rock, &c. It is, however, of different colors—white, rose, and smoky. In its chemical qualities it is considered of an acid nature.. It composes much the larger portion of moist soils, and is found nearly pure in the form of beautiful white sand upon the shores of seas, lakes, and many ponds. In agricultural chemistry, it is termed silex, or silica.

Silex (quartz) enters into the composition of all plants; were it not for this mineral substance to give strength, or stamina to trees and upright plants, they would, if they could grow without it all be trailing plants, unable to rear themselves from the ground, and have as little substance in them, as the potato plant has, that vegetates and grows in the darkened cellar. The ashes of land plants, yields silex in large quantity, and it is evidently essential to the growth of plants, and it forms the skeleton for the sap vessels and it also forms the entire skin—(glaze) of the corn stalk, the stems of grapes—the straw of wheat, and other grains, and on some of the rattans and bamboos, there is such a hard coating as to emit sparks when struck by a flint.

Silex, is not fusible alone in the hottest fire, nor soluble in pure water, and but slightly soluble in strong acids. But if mixed in certain proportions with potash or soda, and subjected to a strong heat it readily melts and forms the well known substance, glass. If mixed in the proportion of one part silex and two parts potash, it can easily be melted, and forms a soluble glass, that is, it can be readily dissolved in boiling water like sugar or salt; in this way silex is artificially rendered soluble.

Nature, also, has a way of her own, in dissolving the "white flint rock" so as to prepare it to be taken up by the roots of plants, for the purpose of forming the skeleton, for the support of the sap vessels, and for making the glaze upon the straw of wheat, &c., it is affected by the laws of crystalization, and in point of fact, is a perfect coating of glass; the object of this coating is to protect the plant against the attacks of insects, and to give strength to the stem.

It has been observed, glass is only a composition of silex, or sand, and soda or potash fused in the hot fire of a glass manufactory. That, coating the stems of grain, grass. &c., is produced in the soil, simply by a chemical union of silica and potash or soda. The potash and soda are derived from felspar. Felspar is one of the constituents of granite, it is not so hard, although it very much resembles quartz, but it differs widely from it in its chemical qualities—being a compound of silex—alumina, (clay) and potash, there being from twelve to fifteen per cent of potash in felspar, that is, a chemist analyzing by an 100 lbs. of felspar, can obtain 12 or 15 lbs. of potash or soda, or some kinds yield potash, others soda. To digress a little, the potash of commerce is derived from wood ashes—soda from the ash of sea plants—potash and grease makes soft soap—soda and grease hard soap, so you will perceive, they are not quite so near alike as six of one and a half a dozen of the other. But they have many qualities in common—both will unite with oils or fat—both will neutralize acids—and both will dissolve silex—both are alkalies. Mica, the other constituent of granite contains six or seven per cent. of potash, These three minerals as mixed up in our granite rocks, yield about seven per cent. of potash when analyzed.

Acids and alkalies react upon each other; the decomposition, or rotting of vegetable matters, always produce carbonic and vegetable acids; in our forests this process is always going on from the rotting of the fallen leaves, twigs, branches, and trunks of trees. The water of the soil holding these acids in solution, they act upon and dissolve the potash in the feldspar and mica portion of the soil, and as much the larger portion of our soils are derived from the disintegrated and finely pulverized granite; it contains a large amount of potash in the stones, pebbles and finer parts of the soil. The potash being thus liberated, or dissolved by the acids—in turn acts upon and dissolves a portion of the silex, and in solution they are taken up by the rootlets of plants, and as I have already observed, by the laws of segregation, and crystalization, the silex is deposited upon the surface of many plants in a hard coating or glaze, and every tube, or sap vessel in trunk and branches of trees and plants, are lined with a coating of the same material.

'Tis in this way, the potash, and the sandy or gritty portion we find left after burning wood, are derived from the soil.

One of the most indispensable inorganic constituents of all land plants, is potash. There is not a single plant in the field or the wood, the ashes of which does not contain it in one state of combination, or another and often in very large quantity—so much so, that the belief was once entertained that plants had the power of generating it within themselves; but more modern researches have most clearly pointed out the source whence it is derived, and the manner in which plants obtain it.

I will give a few familiar illustrations of the solvent properties of potash. Vats and tubs, that have long been used for leaching ashes, have the silica that lined every sap vessel of the wood—and gave strength and solidity to it, is dissolved out by the action of the potash—the woody fibre being insoluble by the alkalie is left behind, and very much resembles flax, and it is nearly identical with the fibre of flax, and cotton. Chemists have given to this woody fibre, the name of LIGNIN. Paper makers in manufacturing paper from straw and coarse grasses, &c. take advantage of the solvent powers of the alkalies, potash, soda or lime, to decompose the silica, or hard coating upon the straw, &c.—Thread and yarn spun from flax, is boiled in lye to dissolve the gritty matter and soften the threads. L. BARTLETT.

January 4th, 1848.

Remarks made before the Rome and Union Club: By T. Gardner.

Use of Clover to Enrich Land.—I have sowed clover seed some 15 or 20 years, and find it a very cheap mode of enriching land. Some land on my farm that would not produce over 25 or 30 bushels [of corn] per acre, when I bought it, will now produce 75 or 80 bushels per acre—and with a good coat of manure I have no doubt it could be made to produce in a good season over 100 bushels per acre.

Use of Straw on Meadow Land.—I hauled out a few wagon loads of straw, and spread evenly over a piece of meadow. The result was, the grass produced it was judged one-fourth more grass. It grew so large that it lodged, while that on the other parts of the field stood up. The portion where straw was applied also produced much the most the second year.

☞ The following article on the agency of light in promoting the process of assimilation in vegetables, is in harmony with a large class of facts. Leibig says, that "the common opinion, that only the direct solar rays can effect the decomposition of carbonic acid in the leaves of plants, and that reflected, or diffused light does not possess this property, is wholly an error, the only difference being, that the process is carried on with greater rapidity under the direct, than under the reflected light of the sun." He adds, that "there is nothing more in this than in the similar action which light exercises on ordinary chemical combinations." For instance, chlorine and hlydrogen combined form muriatic acid. This combination is effected in a few hours in the reflected light of day, but it ensues instantly, with a violent explosion, under exposure to the direct solar rays, while not the slightest change in the two gasses takes place in total darkness. Various other chemical changes attest the same truth. There seem, however, to be some exceptions to the general fact, for while some vegetables have been brought forward with unwonted rapidity by means of artificial light in the absence of both sun and moon, others, the pumpkin vine for instance, is said to grow with great rapidity in the dark.

From the Prairie Farmer.

Light and Vegetation.

MESSRS. EDITORS—The manner in which light, as a necessary agent, affects the growth and productiveness of plants, has not been properly considered by the conductors of agricultural experiments. If this was not the case, there would be less said about the attractive influences of the moon, and more respecting the effects produced by its light—which is undoubtedly important to vegetation, as well as solar light. That plants absorb light for some considerable purpose, is apparent from the fact that the upper surface of their leaves is generally

turned in a direction from which the greatest quantity is to be derived; and that when growing in crevices of rocks, or in situations where light is only admitted on one side, they incline in that direction, showing that the leaves of plants search for light in the same manner that the roots do for nourishment. The Rose Lupine (*Lupinus pilosus*) and many other species of plants that have irritable leaves, invariably turn them towards the sun during the day, and at night to the moon, especially if it be nearly at its greatest light, as if thirsting for rays more intense than those received indirectly, or from the diffuse light of day.

The greatest benefit received by plants from the absorption of light, is in the decomposition of carbonic acid gas, which is one of the principal supporters of vegetable life. It is a compound substance, composed of oxygen and carbon. When it is absorbed in large quantities by plants vegetating exposed to the sun, it is known to be efficacious in hastening their growth; but to plants confined exclusively to the shade, such quantities are injurious, as its carbon cannot be assimilated with the plant, until decomposed—which in this case can by no means be effected, without direct light from the sun. If carbonic acid gas is received into plants that cannot absorb light sufficient for its decomposition, it is useless, or rather injurious to them.—In the decomposition of this gas, absorbed by vegetables, the light is first decomposed on entering the plant—all the rays not being required to produce the intended effect; consequently the green ray is reflected, probably more for its prejudicial tendency to hinder the action of the other rays, than to give the whole of vegetation a uniform color. But as it is, the green ray is never absorbed by healthy, growing plants; but it is reflected, more or less, according to the thriftiness of their growth—which is of itself a circumstance sufficient to bring us to the consideration of the nature of plants, respecting their refusal to absorb a certain particle or ray of light, while exhibiting luxuriance in the greatest degree. If its rejection cannot be accounted for, by supposing that the carbonic acid gas of plants cannot be properly decomposed, even through the agency of light, without the exclusion of the green ray, I am willing to let it remain among the mysteries of nature. When plants digest carbonic acid, the carbon is deposited, forming a part of their substance, while the principal part of the oxygen is permitted to escape from the under surface of their leaves, which is essential, in respiration, to the support of animal life, but is exhaled as entirely useless in vegetation.

Now, since we have seen that light is essential to the growth of plants, may we not justly suppose that it affects their productiveness; and that the practice adhered to by many farmers, of planting seeds at particular times of the moon's various positions to the earth, is mainly correct, though pronounced by the "learned and scientific" to be superstition? As plants of any description require the same length of time in one season, to grow and ripen, as in any other, (should they be favored with like circumstances,) it is evident that those which are in the course of their growth to deposit large quantities of carbon, in the form of fruit, should be allowed to commence vegetating at a time in the proper season, when the moon afforded the best light. Then in a few days they will require the additional light furnished nightly by the increasing moon; and vegetation will progress without interruption, as far as light is concerned. Nature has undoubtedly made judicious arrangements for supplying plants with the important agent. After drinking, through the day, the intense light of the sun, they find relief in the gradual approach of darkness, which changes the process of vegetation in such a manner that oxygen is absorbed, instead of carbonic acid; but, when moonlight is prevalent, it is carried on in the same manner as it is during the day, except the rapid decomposition of carbonic acid is checked by the mildness of the light. If we disregard the irregularity of the seasons, and closely observe the growth of plants that have been planted at the proper time respecting the moon's position to the earth, we will find that there is much benefit to be derived from being attentive to the best time of planting seeds; for, in the cultivation of plants, if the season should not interfere in arresting their growth, we may secure to any particular kind the benefit of moonlight, as they naturally require it. The cause of many failures, in experiments of this kind, may be attributed to some predominant inclinations of the seasons, or to the carelessness of those concerned in the experiment. If farmers would look into their business properly, they would soon be convinced that there is yet much to be learned by them, upon which their prosperity in some degree depends. Therefore it should be the aim of all, to improve, and experiment in agricultural science.

J. HALL.

Athens, Ill. Nov., 1847.

A good Idea.—The editor of the Massachusetts Plowman proposes that instead of so much useless and wearisome talking about agricultural colleges, that those men shall "shell out" for the purpose of sending good agricultural papers to those who are too poor to take them. He thinks a newspaper as good as a school, and that many agricultural papers which now have hard work to make the ends of the year meet, would be helped amazingly.

☞Do not keep a horse too fat, or too lean, as either disqualifies him for hard labor.

The following is an abstract from an article in the Jan. number of the Horticulturist, with comments and additional suggestions by the Editor of the Horticultural Department of the Cleveland Herald.

The Philosophy of Manuring Orchards.

Under this head the Editor of the Horticulturist, in the January number, brings forward in a plain understandable article the necessity of manuring orchards, vineyards, etc., with some other than common barn-yard manure. It is an item which we, although without any chemical analysis, have heretofore urged upon cultivators. Liebeg, in his Agricultural Chemistry, furnished the first steps to this subject, and recently in an appendix to the last edition of this work, analyses of the *ashes* of trees is furnished.—"And still more recently," says Mr. Downing, "Dr. Emmons, of Albany, well known by his labors in the cause of scientific agriculture, has devoted considerable time and attention to ascertaining the elements which enter into the composition of the *inorganic parts of trees.*"

* * "According to Emmons' analysis, in 100 parts of the ashes of the *sap-wood* of the apple tree, there are three elements that greatly preponderate, as follows: 16 parts *potash*, 17 parts *phosphate of lime*, and 18 parts *lime*. In the *bark* of this tree there are 4 parts *potash* and 51 parts *lime*. One hundred parts of the ashes of the sap-wood of the *pear* tree show 22 parts of *potash*, 27 parts of *phosphate of lime*, and 12 parts of *lime;* the bark giving 6 parts of potash, 6 parts of phosphate and 30 parts of *lime*. The analysis of the common *grape vine* shows 20 parts of *potash*, 15 parts *phosphate of lime*, and 17 parts *lime* to every 100 parts; the bark giving 1 part potash, 5 parts *phosphate of lime* and 39 parts of *lime*." This is certainly all valuable as far as it goes, but it is short of what is desired to aid the cultivator of orchards in growing fruit of varieties perfect. To obtain and apply these manures instead of barn manure is an easy matter, as common wood ashes contains them all, and may be applied in large or small quantities without much risk of endangering the welfare of the tree.

"The more scientific cultivator of fruit will not fail, however, to observe that there is a very marked difference in the proportion of these inorganic matters in the ashes of the tree under our notice. Thus potash and phosphate of lime enter much more largely into the composition of the pear than they do in that of the apple tree; while lime is much more abundant in the apple than in the pear; the ashes of the bark of the apple tree being *more than half* lime. Potash and lime are also found to be predominant elements of the inorganic structure of the grape vine."

"The more scientific cultivator" will doubtless avail himself of this analysis, but to do so with success in general orchard culture something farther is necessary. Analysis not only of the species of tree, but also of each variety must be furnished ere it will be possible to cultivate fruits of varieties equally successful in one section of country as another. Mr. Downing, although not writing it out, we think, had the like impression, for he says: "Hence it is not unlikely that certain diseases of fruit, known as the bitter-rot in apples, the mildew in grapes, and "cracking" in pears, known and confined to certain districts of the country, may arise from a deficiency of those inorganic elements in the soil of those districts (not overlooking *sulphate of iron* so marked in its effect on the health of foilage.")

By the above analysis the cultivator would be induced to make use of the specifics in all cases and to all varieties of fruits, without real knowledge of its avail, as in the culture of the Newton Pippin and Winesap, two varieties all unlike as regards the want of Specific manures. For while trees of the Newton Pippin cannot on sandy soil be grown to produce a perfect fruit without a heavy dressing of lime, the Winesap flourishes and produces its fruit in the most fair and perfect state, even on soil so sandy as to be regarded as almost valueless, and on the contrary the fruit of the Winesap when grown upon a clay-loam appears not to be improved, while the Newton Pippin on such soil produces its fruit in perfection.

"Again, the greatest difficulty in fruit culture in America, is to grow the foreign grape in the open air. It is not heat nor fertility that is wanting, for one section or another of the country can give both these in perfection; but in all sections the fruit mildews, and is, on the whole, nearly worthless."

Saying thus much, Mr. Downing proceeds to record an instance where a plentiful dressing of wood-ashes to the grape border resulted in a perfect crop of fruit. We should, ere this, perhaps, have given record to a like result with a vine of foreign grape in our neighborhood, which, without any protection the previous winter, was in early spring supplied with a liberal dressing of ashes and produced a crop of as fine and perfect grapes as we ever wish to eat.

These analyses and evidences are all good, but they want to be farther and more minutely extended.

Saxon and Merino Sheep.—Mr. Reed Burritt, of Tompkins county New York, having tried both kinds of sheep, Saxons and Merinos, gives the latter preference. He states that with the Saxon flock, his clip was two and a half pounds—while the yield from the Merinos is an average of nearly four and a half pounds. The superior fineness of Saxon wool is conceded, but the excess of quantity in Merino wool, exceeds the excess of price in the other. His flock now

consists of 500—of which one half are pure blood Paular Merinos, the other half, a high cross of the common Merino on the native and Saxony, which makes their wool about the same quality as that of full blooded Paulars. Mr. Burrit states also, that in raising lambs, his loss with Merinos was in the ratio of one to every three Saxon, or 5 per cent. of his Merino lambs and 15 per cent. of his Saxons.

His clip for 1847 sold at 37½ per lb. cash, amounting according to the above estimate, to near three hundred and fifty dollars, or more than $1 62½ each. His lightest fleece was 3 lbs. 6 oz., the heaviest 7 lbs. 14 oz.

Dairying in Michigan.

The following remarks from the Prairie Farmer, in relation to dairying in Illinois, are equally applicable to the manner of managing matters of this kind in Michigan. Indeed, our dairy season is still shorter than it is represented to be in Illinois. By far the best part of it is over within two months, that is, in those portions of the State where wild grass is dependud upon, and it is the main dependence in a large portion of the State:

We wish we could state the average length of our dairy season here on the western prairies; but as we cannot, we will ask the question—how long is it? How long is it with you, who pasture your cows on the prairie, and depend alone on that for feed? In this latitude the prairies afford full feed about the middle of May—often not till the first of June. After that for two months, their pastures are luxuriant; though the feed is much of it very aromatic, and all of it very astringent—and we think much better adapted for fattening stock, than for inducing the secretion of milk. In a former article we have alluded to the inferiority of the products of the dairy made from it. About the first of August it begins to get hard, unless the grounds have been late burned. By the middle, or latter part of August, the grass is decidedly of the "sere and yellow leaf" sort; and after the first of September it is but a poor excuse for dairy feed, when there are no frosts. But should even a light frost supervene, it is killed dry enough to burn. Here, then, we have from the middle of May to the first of September—a period of three and a half months—for the dairy season; or the season is shortened just one half. And yet we know of people who go on year after year, content to follow this miserable fashion of making butter and cheese. The effect upon cows may be imagined. No such thing as a good cow can be possible under such treatment—the best animal in the world would be ruined by it. Full feed in the summer, good feed in the winter, and no feed in the fall and spring, are at any rate little better than poor feed the year round—and we are not sure, but a good deal worse.

The treatment of a certain dairy, which we had full opportunity to observe, in the state of Vermont, was after this fashion. The cows were stabled during the winter—for winter treatment is the foundation for dairy business in summer—and fed with good hay, and now and then a little corn meal. There was consequently no discontent among the cows. The lowing or "bellowing" of one would not be heard from November till calves came. Meek, contented, quiet faces; coats lively and smooth as moles; with good appetites, good health, and successful bringing of calves in the spring; were the characteristics of the drove. They were in good heart—had capital, momentum, to commence the summer's work with. This is an immense object: a cow in good flesh and heart in spring, is worth, for summer's use, a quarter or a third more than a poor one. Her milk is not only more plentiful, but it is far better in quality.—

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When feed began to be short in the fall, a good piece of cornstalks or rowen were ready, and daily dealt to them. In the season of 1836, the 31 cows thus treated, made 16,600 lbs. cheese, and 200 lbs. of butter, which were sold, besides butter and milk for a large family during the season.

Muck.—We have frequently been told of the immensity of muck to be found in the swamps and upon the low lands of our State. And it may still be a question whether our farmers are fully aware of the value of this precious material. It is well known that lands newly cleared produce excellent crops of grain and grass without the aid of barn yard manure. And the reason is obvious enough; the soil is full of rich vegetable food.

Now in point of fact, the substance we call muck has precisely the same qualities as the vegetable matter just mentioned, and it is easy to draw the conclusion that this is what is wanted in order to recruit exhausted lands. But muck in its raw state contains a certain quality called by agricultural writers ACIDITY. Until this acidity or sourness is broken down in the muck it is rather unfit to furnish wholesome food for plants In case of the newly cleared land we have a powerful ANTI-ACID, viz, an abundance of wood ashes, which operating upon the vegetable matter, correct the quality so unfriendly to the growing crop. And now the question may be asked how can this acid quality to be found in the muck be corrected in the best, cheapest, and most expenditious manner? Here is a subject which ought to engross the attention of agricultural societies and farmers generally.—Considerable light has already been thrown upon this subject, but much remains to be learned.

(Maine Farmer.)

Extract of an Address

Delivered before the Danville Township Farmer's Club, on the 9th of November, 1847, by J. A. Pinto, Secretary of the Society.

Brother Farmers: We, as a society are in our infancy; our manhood must depend upon our own individual exertions. We have formed a society for good and laudable purposes, and if our success is not fully realized, we may be assured the fault is with us, and we can have no claim to be classed with the intelligent and persevering farmers of the great west. When we turn our attention to agriculture the parent of all arts, the source of our purest and most substantial enjoyments, we find it quite as susceptible of improvement as the mechanic arts, which we all know are improving with unexampled strides. If the farmers of the country would improve in *their* department as rapidly, *they* must make a joint stock of their knowledge, and thus individually profit by the experience of all. If we lack the knowledge (and who amongst us does not) which precedes improvement, let us seek for it by observation, by study, and by a mutual interchange of opinions, in associations like our own. I trust that we shall hear much, and read much during the winter that is instructing and useful, and much that will stimulate us to new exertions in our business. The first step to improvement is to acquire better knowledge in our business. The second, to apply this knowledge with judgment to the management of our farms. We believe that Agricultural Journals will afford us the most ready and cheap means of instruction. They bring to us at regular periods, and at trifling expense the improvements which are continually being made in the business of farming—as well as in mechanic arts. They explain to us the principles upon which the new and improved system of husbandry is far more productive, more certain and more profitable than the old. And they demonstrate the correctness of these principles by the successful results they give in practice: besides, they bring to our knowledge every improvement in the labor-saving implements of the farm. They are in fact the most useful journals of the day, and no farmer should be without them.—*Iowa Farmer.*

Rich Buckwheat Cakes—Take two pints fresh buckwheat flour, and half a pint of sifted corn meal, mix with milk to a thin batter, add one table spoonful of fine salt and two teaspoonfulls of brewer's yeast, or an equivalent of other yeast. Leave the whole in a stone jar in a warm place to rise over night. In the morning add a teaspoonfull of saleratus dissolved in a tablespoonful of hot water, and then bake immediately.

Economy.—A man who chews $14 worth of tobacco annually, stops his newspaper because he cannot afford to take it.

Manuring by means of Clover.—Messrs Editors,—The practice of manuring by means of turning down second crops of clover for wheat, and the experience that teaches it is by far the cheapest and most efficient of all dressings seems to have taken possession of the agricultural community in many parts of the country, particularly where the farms are so large that "it gives them the heart ache, even to think of carrying abroad and spreading manure from the cart." The fact is, manuring by means of clover, has introduced a new era in farming, and it begins to be seen that one half the objection to large farms is done away, when, by some intelligent, enlightened cultivator, the system has been adopted and properly pursued. I was a good deal amused while at the house of a friend who was turning down a crop two tons to the acre for wheat, to hear his wife coax him to permit the cows to be turned into it for a single day: but he would not spare an ounce of it, for love or money.

But how strangely at variance is the present estimate, in regard to this all-important crop, with what it was but a few years since! In a work before me, "Lorain's Husbandry," than which I know not a more interesting publication generally, I find the following observations which are worth preserving.—*Bost. Cult.*

Plums—The Curculio.—In a recent letter of Mr. Longworth, to one of the daily papers of Cincinnati, he says that he has had but two crops of plumbs in thirty years, where his "trees were not set in a brick pavement." and that where this protection against the curculio had been adopted, he has not lost a crop from the ravages of this insect, for eighteen years past. His plum trees are planted close to the house, where persons are constantly passing at the very time these insects are most destructive, and the brick pavements around the trees extend beyond the branches. Salt has had a fair trial in that vicinity, and has failed entirely.

Mr. L. seems to endorse the opinion that the curculio will not visit trees where animals are constantly running amongst them, and this may account for the benefits some persons say they derive from having their plum trees in a hog field.

Any remarks from Mr. L. on this, or any other subject connected with Horticulture, are deserving of particular attention.

T. A. Denomandie says that by having deep soil, sowing five bushels of common salt to the acre, and not cultivating the crop after it comes into blossom, he has raised a large crop of potatoes, which are as yet entirely free from rot.

Education.—One of two things must be done in this country. Parents must expend money to educate their children, or they must pay taxes to build penitentiaries and to punish crime.

From the Boston Cultivator.

Potatoes and Muck or Peat.—I have noticed numerous articles in your paper on the Potatoe disease, and as you solicit the experience of farmers in different sections in relation to this malady, I now send you our method of growing potatoes. For more than ten years we have used swamp muck or peat to a large extent for manure in growing potatoes and have had no diseased ones when we raised them with this manure. We planted this season plat No. 1, a gravelly loam sward, contains seventy rods, top dressed with muck that had been hauled into the yard the previous fall, planted English Whites, Mercers, Blues and Rohans, about two feet apart, the last of April which gave this fall ninety bushels of large sound potatoes.

Plat No. 2,of about the same size, was top dressed wiih muck from the yard and manured in the hill with muck from under the cow stable saturtaed with urine, and planted the last of April with a superior kind of potatoes which we have produced from the seed or ball, and yielded full one-third more than piece No. 1, of very fine sound potatoes. Plat No. 3d, of one half acre manured with muck spread on ; soil, loam, put a handful of ashes and plaster in the hill and planted same time as the above with other kind of potato from the seed, which gave a large crop of large sound potatoes. For an experiment we planted a few rods immediately joining plat No. 1, same kind of soil, manured with coarse heap manure, the kind of manure commonly used in this vicinity for potatoes, planted different sorts of seed, and on harvesting had a large yield, but about one-fifth were diseased. In 1846 our tops were struck with the blight and died, in the early fall, but the potatoes were large and sound, this piece was manured in the hill with muck, ashes and plaster. We have been so successful in growing this esculent with muck or peat that we are of opinion that it is a preventive of the rot ; the cause of the disease we will leave to the speculations of theorists ; but the fact, that we do grow large crops of entire sound potatoes by the use of peat, ashes and plaster, for manure is well known in this section while some of our neighbors that cultivate in the old fasioned way, using common barn yard and heap manure lose one third and some one-half of their crop, soil of like quality with ours.

It is a well known fact that peat is a preventive of putrefaction in animal bodies, as there are numerous instances of the human body being found in peat, bogs and morasses preserved entire, indeed such is the disinfecting power of peat, that when saturated with urine and putrescent matters it will evolve very little if any any effluvia or miasm ; hence from knowing these facts we use large quantities of peat in our yards, stables, hog pens and vaults, to absorb the urine, soap suds and wash from the sink which mixed and composted turns out a greater amount of the most valuable manure (as our crops fully attest,) than we should otherwise have without the use of peat or swamp muck.

O. H. Wood.

Woodville, Somers, Conn., Dec. 14, 1847.

Deep Plowing.—Among the foremost of its advocates is seen the Hon. Dixon H. Lewis, "the great Senator from Alabama," who at the meeting of the New York Farmers' Club, thus expresses himself.

On his plantation there was a deep black soil and corn had been raised on it for twenty years in succession, as in his State little attention had been paid to crops. He formerly got from 60 to 75 bushels of corn to the acre, but latterly, but from 30a45 bushels. He concluded this was owing to shallow plowing, which had been but 5 inches deep, and the soil had become exhausted. He therefore sent to the north, and got one of Prouty & Mears' plows, and plowed as deep as it could be done with three horses ; and he had now the best crop within 50 miles, standing the cold wet weather best. He had plowed from nine to twelve inches deep, and had plowed with a subsoil plow between every row of corn ; making both together a depth of sixteen inches. The soil, a black limestone, was not turned over to this depth, but it was *thoroughly broken.* By By digging deep ditches, he had discovered that the deeply turned soil was the best. He considered corn at even 40 cents per bushel, was the best crop grown ; but he would rather grow corn at 25 cents per bushel, than cotton at 6 to 7 cts. per lb. Deep plowing, he observes, drains the land, and makes it warmer.

Preserving Butter.—The farmers in the parish of Udney, in the county of Aberdeen, practice the following method of curing their butter, which gives it a great superiority above that of their neighbors:

Take two parts of the best common salt, one part of sugar and one part of saltpetre; beat them up together, and blend the whole completely ; take one ounce of this composition for sixteen ounces of butter, work it well into the mass, and close it up for use.

The butter cured with this mixture appears of a rich and marrowy consistence, and fine color, and never acquires a brittle hardness, nor tastes salty. Dr. Anderson says, "I have ate butter cured with the above composition, that has been kept three years, and it was sweet as at first." But it must be noted, that butter thus cured must stand three weeks or a month before it is begun to be used, if it be sooner opened, the salts are not sufficiently blended with it ; and sometimes the coolness of the nitre will then be perceived, which totally disappears afterwards.

The above is worthy the attention of every dairy woman.—*Edinburg Journal.*

MICHIGAN FARMER,

WARREN ISHAM, EDITOR.

PUBLISHED SEMI-MONTHLY—TERMS $1 IN ADVANCE—FIVE COPIES FOR $4.

Agricultural Science.

The great obstacle in the way of the application of Agricultural science to practical husbandry, consists in the want of that small degree of elementary knowledge of Geology and Chemistry on the part of our farmers, which is an essential pre-requisite. This remark does not apply to that class of farmers who have familiarized themselves with agricultural publications.—Such, for the most part, have so far initiated themselves into the mysteries of those sciences, that they have little difficulty in riddling out the wholesome truths which are often necessarily couched in technical phraseology. But there are multitudes of others, whose acquaintance with agricultural publications is comparatively recent, and to whom many of the technical terms employed are a very great stumbling block—and other multitudes still, who neither know nor care to know any thing on the subject, and the difficulty of reaching this latter class, is greatly increased by the necessity of using such terms.

It is thus, that the conductor of an agricultueal journal feels himself embarrassed at every step. It is true, that very many things of great practical importance may be conveyed in language intelligible to all, but so far as the *science* of agriculture is concerned, the employment of terms unintelligible to the uninitiated, is indispensable.

Nor is the difficulty of mastering these formidable terms so great as at first sight appears.—Let any man possessed of an ordinary share of understanding, but set himself resolutely to the task, and we will venture to say, that in three weeks' time, he will find himself the happy possessor of sufficient knowledge on the subject to enable him to read with equal profit and delight, an article, which previously would have repelled him by its unintelligible jargon, and that too without subtracting an hour from the labors of the field. Try and see if it be not so. Say not that "there is a lion in the way." Be resolute, walk fearlessly up to the subject. You hold in your hands the key, and it is your privilege to unlock and avail yourself of the rich stores which to you have hitherto been inaccessible. Will you make the effort, or will you sink down in mental sloth, and cry, "a little more sleep, a little more slumber, a little more folding of the arms."

Essays on the progress of Nations

In productive industry, civilization, population and wealth, illustrated by statistics of mining, agriculture, manufactures, commerce, banking, revenue, internal improvement, emigration, mortality, and population, by Ezra C. Seaman.

The above title involves subjects of the gravest importance—subjects which have, from age to age, called into requisition the profoundest intellects of their time. To enter the lists with such men, may seem presumption in a citizen of young America, and especially of the young West. And yet, pre-eminent as a man must be in labor and research—in habits of patient investigation, in grasp of intellect, far-reaching thought, nice discrimination, and logical acumen in order to the successful execution of a work of this kind, we will venture to say, that no man at all capable of appreciating its merits, can read the book, without being lead almost involuntarily to exclaim, "well done."

With some of the author's conclusions all will not agree, but none can fail to profit by the rich stores of information which are made available in the progress of his investigations, nor can any complain of unfairness in the maintenance of his positions.

To the farmer and the mechanic, no less than to the professional man and the statesman, it will constitute an invaluable acquisition. There are several chapters devoted exclusively to the rise and progress of agriculture and the mechanic arts. It would do an anti-book farmer good to read these chapters and see what wonderful improvements have been made, from time to time, in an art, in which he boasts of having attained perfection by his own experience. He might thus be lead to mistrust, that if it has taken ages upon ages to bring the art to its present state of improvement, there may possibly be some little room left for improvement in future.

We recommend to all our agricultural friends to get this book. It is a library in itself, of inestimable value. The volume contains 455 pages, neatly got up, with a supplement in pamphlet form, of ninety pages—for sale at McFarran's.

The Horse,

What a noble animal! When properly treated and cared for, how plump and sleek, how beautiful in symmetry, how proud in gait, how cheery in spirits, how powerful in action, how docile, how intelligent and how ready.

But how ungracious, how barbarous the treatment this noble animal receives at the hands of his tyrant lord? Do you see a couple of things before yonder wagon, with back-bones like a fence-rail, and hip-bones projecting like the horns of a yearling steer, with their once proud and lofty necks bowed down to the earth, and countenances as forlorn as despair itself? How unlike the noble beast above described.

And what makes the difference? Simply, that in the one case he is properly treated and cared for, while in the other, his constitution is broken down, through the overtasking and underfeeding rapacity of man.

But is human avarice the gainer by thus pushing its ends? No, no, avarice is blind, and cannot see. The horse thus treated, does not live out half his days, and during the abbreviated period allotted to him here on earth, the poor thing is not unfrequently so crippled as to be rendered comparatively useless, while the cost of his keeping is much greater, than if he had not been thus abused. We have seen horses, at the age of twenty-one, with more vigorous constitutions and possessed of more muscular power, than others at the age of six.

The School Law.—Township Libraries, &c.

We have received from the Superintendent of Public Instruction a copy of his compilation of the common school law of Michigan, accompanied with notes and explanations. Among other things, we notice, that the funds appropriated by the State to the purchase of Township Libraries, have in some instances, been perverted to other purposes, and that in other instances, the law has been misconstrued, and the use of the books restricted to those between the ages of four and eighteen, whereas the intention of the law is to make the books accessible to every class of the community. In other cases, the township has voted to dtvide the library money among the districts, which is also an infringement of the law. It is made the duty of the director to draw from the Township Library the number of books to the use of which the district is entitled (that number being proportioned to the number of children between the ages of four and eighteen) and return them, at the expiration of every three months, viz: on the first Saturday of January, April, July, and October.

The Superintendent thinks, that it is not the intention of the law to exclude from the benefits of the school fund persons not included within the ages of four and eighteen, but that those ages are named to serve as an equitable basis for the apportionment of the school fund.

He thinks also, that parents have no legal right to send children from one district into another to attend school, and that any district has a right to exclude children from another district, unless the parents pay taxes in both districts.

The superintendant says the question has been put to him in several instances, whether it is the duty of the director to report the colored children of his district, between the ages of four and eighteen, and whether such children are entitled to the privileges of the school fund? To which he replies, that the law makes no distinction, except where a special act of the legislature has been passed, as in the case of colored persons in the city of Detroit.

No district is entitled to draw public money, unless a school has been taught three months, by a qualified teacher, during the school year last closed.

The New York Farmer and Mechanic.—This is an excellent publication of sixteen pages, devoted to agriculture and the mechanic arts, always interesting, published weekly, at two dollars a year in advance, in New York. Those who have an inclination for a publication of this kind from abroad, cannot do better than to take this.

Plaster on Marshes.—It was the custom of the late Mr. Wyndiatt, of Waterford, Oakland co., to apply plaster to his marshes in their unreclaimed state, and we are told that the effect was an increased yield, quite equal to that produced by its application to his upland meadows.

☞ A farmer in Southfield, Oakland co., summer-fallowed the half of a field of turf land year before last, and prepared it by crossing and dragging in the usual manner. In preparing the other half, he simply turned the sod under and dragged. The result was, that the crop was about equal on the two parts.

PLASTER ON CORN.—It appears that the application of plaster to our opening soil, is highly beneficial to the corn as well as to the wheat crop, and to the grasses. A farmer in Waterford, Oakland county, applied plaster to part of a field of corn, the last season, in the proportion of a table spoonful to the hill, and the consequence was, that the part plastered yielded one third more than the part left unplastered. Another farmer in the neighborhood of Pontiac, made a similar application of plaster to the poorer and lighter portion of a field of corn, and as a consequence, the crop was incomparably superior to that which grew upon the far richer soil of the part left unplastered. In both the above cases, the land was rather sandy.

☞The important facts and suggestions, contained in the following communication, are worthy the attention of every Farmer.

For the Michigan Farmer.

Root Culture.

Few persons, who have not actually made the experiment, are aware of the absolute advantage of growing the different kinds of root crops for farm stock. Many a farmer will take grass to cut "to the halves," who has, at least, a spare acre, which if sown with the ruta-baga, or carrot, would yield a far greater remuneration at a vastly less expense. The labor necessary for performing the one, is hard and heavy and must be done in the hottest season of the year; while that required by the other, is light, easy and withal pleasant. Many a farmer on our western openings, will, day after day, shoulder his scythe and dinner and walk two to five miles to procure a miserable article of marsh hay—return at night, fatigued and worn down with toil—while if he had appropriated a single acre to to the cultivation of roots, and with a little more care to cut his grain while the straw is yet quite green, thereby securing it with a two-thirds hay value, he would find, I think, that his animals would do better with less expense, and his own condition be greatly improved. The writer has kept working oxen, fat all winter on ruta-bagas and straw. They are not considered good for feeding milch cows, as they impart to the milk an unpleasant flavor. But for cows that are dry and young cattle, it is believed there are no farm products which can be used to so great advantage. Carrots are the delight of milch cows, rendering milk and butter almost as yellow and rich as in June. Carrots may also be fed, and with much profit too, to working horses. Nor is this all.

The condition of the soil is actually improved by the cultivation of root crops. They require two or three good dressings, and by this means every noxious weed, which upon a man's farm are like vices upon the character, will be entirely eradicated; and by thus frequently stirring and loosening the surface, the soil is also rendered permeable to atmospheric and solar influence, and derives a bountiful supply from the great storehouses, of the indispensible food of plants. And moreover, as the rains descend, they carry *into* the soil ammonia from the atmosphere, the loose surface permitting it to penetrate freely, a portion of it being taken up by the spongioles, or small roots of plants, and another portion remaining, by a chemical change which it undergoes, fixed in the soil, for the benefit of another and further crop.

All will conclude with me then, I think, that, considering the advantages in feeding, and the benefits to be derived from them as a means of improving and enriching a farm, no crop, grown for home consumption, is so profitable as are those of roots.

CHAS. BETTS.

Redford, Jan. 1848.

For the Michigan Farmer.

MR. EDITOR.—In the July number of the Michigan Farmer, there was an important problem presented, for the solution of which I have looked in vain in each succeeding number. Despairing, at length, of such solution appearing, and being well aware that the evil therein pointed out, deserves the attention of the producing classes of Michigan, I am prompted to say something on the subject, and though I do not consider myself competent to solve the question, I will venture to make a proposition to some of the farmers of the West, which if followed, would give to the farmer one half or one third at least, more goods, for one bushel of wheat than he now receives. The method I would propose, is the formation of clubs of farmers, who can deputize one of their number to take their surplus produce to the New York or Boston market, sell it out, purchase for each, what goods he may want, fetch them home and receive remuneration for his trouble and expense from the members, according to the amount sent by each. Such organizations have been heretofore projected in this part of the State, but there has, I believe, never yet been one carried out with

success, failing, I believe, from a want of zeal in the cause. Such a conrse, if pursued by the farmers, could not fail to bring the merchants to fair terms, and would, no doubt, after a short time, ensure the farmer a fair price at home, which it is certain he does not get at present, as is shown in the afore mentioned problem.

CARPENTER.

For the Michigan Farmer.

Where is Dr. Lee?

Mr. Editor,—Is it possible, that the flagrant deception hinted at in the last number of the Michigan Farmer, has actually been played off upon the community by the proprietor of the Genessee Farmer? When a man is known to be a common liar, we know how to take him, but what shall we say or think, when such things are laid to the charge of a hitherto respectable Agricultural Journal? I can hardly believe anything of it, and yet, as was hinted in the last Farmer, there is manifestly internal evidence of a change, "the imprint of Dr. Lee's great mind being no longer visible upon the pages" of the above named publication.

But I should like to know more about this matter, as I have always been an admirer of Dr. Lee and a patron of the Genesee Farmer. If these things are so, I have done with it. When I saw Dr. Lee's name announced as the editor of the Genesee Farmer, for the present year, I supposed it was done in good faith. If I have been swindled, I would like to know it.

AN INQUIRER.

[We would only say here, that the following is an extract from the December No. of the Southern Cultivator, published at Augusta, Ga., viz:—"Edited by Daniel Lee, M. D., late editor of the Genesee Farmer."—Ed. Michigan Farmer.]

Grosse Isle, Jan. 18, 1848.

Mr. Editor,

Dear Sir—While engaged a few days since in the woods, (chopping) I noticed that my axe was on the point of bidding adieu to the handle. The thought occurred to me that there could be an improvement in the shape of the eye. For instance, make the eye wider in front, than at the back, so that when the wedge was driven in the handle, the axe could not possibly come off.

I do not know but some are made so now, however I have never seen, or heard of any; all the axes I ever saw, have had eyes straight, or a little hollowing in the centre, and likely to become loose, by which means, accidents often occur especially where there are a number of choppers together. I have spoken to a number of individuals about it, and they all thought it a good plan.

I write this little article, thinking possibly it might meet with your approbation, and if so, with that of the axe manufacturer.

A Young Chopper.

☞ The instances detailed in the following communication, are strikingly in point, to show the advantages of subsoiling. In the mean time it does us good to know that our own maiden efforts are regarded with favor from such sources.

For the Michigan Former.

Deep Plowing.

Mr. Editor,—In a late number of the Michigan Farmer, I noticed an article entitled "Subsoil Culivation—its advantages," which I read with deep interest. The advantages described in it would seem to be sufficient to unhesitatingly induce the adoption of the system therein recommended. The nature and philosophy of the advantages to the soil may not be fully understood by all, but there is the one great resulting advantage to the cultivator, which no man can fail to appreciate, viz, a *heavy crop*—a remarkably liberal reward for *deep plowing*. With a view to show that *deep plowing* is thus almost universally rewarded, when practised upon proper soils, I might, in citing instances, "write and write till volumes large were filled." But notwithstanding this fact, I will content myself with mentioning in this article, but two; hoping that a perusal of them, will not fail to induce, at least, a few experiments.

The first which I shall notice, is one that was related to me by a very credible neighbor of mine. He informed me, in a conversation with him on the subject of subsoil plowing, that a few years since, when residing in the town of Ashfield, Mass., he was directed to plow a piece of ground for corn, which had been tilled for several consecutive years. The team being rather wayward, and at last getting out of patience with them, he "let out a link" to worry and sober them. This, of course, caused the plow to go in to the beam, turning up in flakes, the under soil, which, till then, had not been disturbed for years, if ever. In this manner the remainder of the land was finished. The soil was a gravelly one, containing a small proportion or admixture of loam. Althongh there was no material difference in the cultivation of the different parts of the field, still the contrast, in the yields of the corn, grown upon the deep and the shallow plowing, was most striking—that of the

former being, at least, *one-third the greater.*

The second and the last one, which I propose to put on record, at this time, is one that I learned from the lips of another neighbor of mine, who, like the first one above alluded to, is also a respectable farmer, and a strong believer in *deep plowing.* the circumstances attending it were briefly as follows. Having occasion to prepare a piece of land for corn, which had been under the plow several years in succession, till, in fact, it became so poor as to be unfit for the growing of whitbeans,he resolved *to plow it deep,* and accordingly prepared himself with a strong team for that purpose, his neighbors, who were acquainted with the piece of land in question, laughing at him in the mean time, for his foolishness, as they were pleased to term it. He however persisted in this system of cultivation, and although he added no manure of any description, he was neverthetheless blessed for his wisdom, with the greatest corn crop in the neighborhood. So much, then, in favor of *deep plowing*—all of which goes to show that those who adopt it, "will have corn to sell or keep."

January 10, 1848. OTISCO-

For the Michigan Farmer.

Peaches and White Fish.

Who does not know George Clark, the commodore of fishermen upon the Lakes? This same Mr. Clark has, within a few years, fenced in, by driving pickets, about one acre of the Detroit river, near Grass Island, for a fish pond. In this pond Mr. C. places, every fall, several thousand White Fish. This serves, as Mr. C. thinks, a twofold purpose, viz. the principal one is, to preserve the spawn and perpetuate the fish. Another is, to have fresh fish for market all winter. During the fishing season in the fall, the fish, to the number of ten or twelve thousand, are thrown from the seines into the pond, to spawn. The pickets are driven far enough apart to allow the young fish to escape and near enough to keep the old, until they are wanted for market; when that time arrives, they are drawn out with nets and sold, and generally at a price that pays pretty well for the trouble.

Not content with this "fish orchard," as Mr. C. terms it, he is now engaged in raising portions of Grass Island, (which is about level with the river, the grass only appearing above it,) sufficiently high for cultivation. Grass Island being one of Mr. Clark's principal fishing depots, large piles of fish offal collect there. This offal he is endeavoring to turn to a good account, by spreading it upon the island, then throwing wood upon it for a foundation, then boating earth from the main land to throw upon that. In this way he has built several small patches, making it about three feet from the bottom of the offal to the surface of the earth. Mr. Clark says, by placing the offal at the bottom and the wood upon it, the wood sinks down and makes a complete mass of wood and offal; whereas, if the wood should be placed first and the offal upon that, they would not mix, and it would take more earth to complete the whole.

Upon one of these patches, Mr. C. has now several fine Peach and Cherrytrees growing very luxuriantly. Some of the Peachtrees bore finely the last summer. It is the design of Mr. Clark to make an extensive orchard on this island. J. C. H.

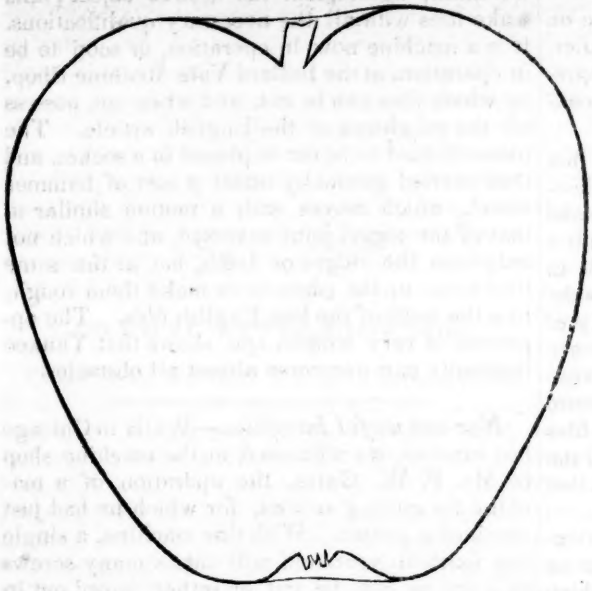
Detroit, Jan. 26, 1848.

Economy of Good Sheep.—A correspondent of the Farmer's Monthly Visitor, published in New Hampshire, says:

"There are many of our wool-growers who keep sheep—the average weight of whose fleeces is not more than two and a half pounds, and the wool not worth more than twenty-three to twenty-five cents the past season. Now it is more profitable to give a large price for a good flock than to get a bad one for nothing. The extra weight of those sheep whose fleeces will weigh from four to five pounds, and the wool of which would be worth thirty cents a pound, the past season, together with the extra price per pound, will pay the interest on from ten to fourteen dollars, to say nothing of the extra worth of their lambs. I keep a flock of Merino sheep, and have fifty-four ewes—the fleeces of which, taken from them last June, weighed two hundred and seventy pounds and four ounces washed wool, or five pounds to each fleece. The lightest fleece four pounds six ounces, the heaviest seven pounds four ounces. Many people who keep unprofitable sheep, say they cannot be at the expense of buying those that are high. To such, I would say, if one-half or one-third of your whole number of ewes are middling sheep, keep them for breeders, and turn the remainder with the weathers for mutton. Get a first rate buck, and a few prime ewes; and each year, at shearing time, number your sheep by putting figures on them with tar, and put the numbers on paper, carrying out the weight of each fleece, and those that are objectionable turn off to fat without raising any stock from them.

Good Economy.—To save ten dollars in the purchase of a cow, by giving twelve only for one that will yield eight quarts of milk a day, rather than twenty-two dollars for one that will give fourteen quarts. The difference, six quarts of milk a day for six months of the year, at two cents a quart—half its real value only—is just twenty-two dollars, the exact price of the best cow.

To burn green wood, because it takes the heat of one half to dry the moisture out of the other half. It also makes a quick fire, and consequently an early breakfast, every cold, wet, rainy morning.



The White Belle Fleur.

The White Belle Fleur, says Downing, is one of the most popular apples in the Western States. It grows pretty strongly, bears very abundantly, and its brittle bearing shoots are inclined to break—head spreading, but not drooping. This is a very fair and handsome fruit, less acid than the Yellow Belle Fleur.

Fruit medium to large. Skin smooth pale yellowish white, marked with small round dots, and rarely with a faint blush. Stalk short, planted in a narrow shallow cavity. Calix small, set in a small narrow basin. Flesh white tender and juicy, with a delicate sprightly flavor. October to March. To be obtained at the nurseries of Charles Hastings, Esq., Troy, Oakland county, and the Messrs. Lays, Ypsilanti.

Corn Cobs.—Solon Robinson, speaking of H. L. Ellsworth, formerly commissiouer of patents, now of La-Fayette, Ia., says:

"Mr. Ellsworth assured me that he had proved the mooted point of nutritive food in corn cobs. He says: "Hogs will live and thrive upon well-ground cob meal alone! At first they did not take hold. I then added a small quantity of meal of the grain, principally to make the mass ferment quicker, and then they ate the whole, and did well. I had great difficulty in getting the cobs ground. Millers are so well satisfied in their own minds that cobs are good for nothing, that they are not willing to let the experiment be tried, whether they are nourishing or not. I am satisfied that twenty-five pounds of corn meal, added to one hundred pounds of cob meal, is more valuable for feed for growing stock, than seventy-five pounds of corn meal alone." Such is the language of Mr. Ellsworth. Experiments of this kind should be further tried. One-fourth of the weight of a bushel of ears of corn nature never intended should be thrown away, and cobs upon large corn farms in the West are literally thrown away. They are neither used for food, fuel, feed, nor manure; for the latter is considered a nuisance."

N. Y. Farmers' Club.

J. D. Williamson.—I found in Tennessee a field of rice on high land, some 1400 hundred feet above the level of the river. This presented an extraordinary crop. By measurement as nearly as we could, the crop must have been at the rate of two hundred and fifty bushels per acre. This field is on Walden's Ridge. The seeds had been sown in drills. I present a specimen of this rice to the Club.

I present also cotton grown from seed of Sea Island cotton, on high ground in Tennessee.—Trials of this cotton had been made there—and 803 bales of it had been raised—and last year 4,000 bales of it were raised.

Mr. Underhill, of Burlington.—In 1840, I established a small farm, and endeavored to learn how to manage it. The first thing I thought of, was the necessity of having good seeds. I tried first the Lima beans. I spread half a bushel of them on a table, and then carefully picked out what seemed to be the very best of them. Having done this, I removed the rest, and then spread my selected beans on the table, and picked out from them the best; these I planted, and in six years, by continuing this selection, I succeeded in producing extraordinary beans, such as I am afraid to describe without having them before you. Some dtstinguished friends of mine, who have eaten them at my table, declared that they could hardly believe them to be Lima beans. They are very large and very delicious.—*Farmer and Mechanic.*

Warts on Cows.—A writer in Bell's Messenger, says that a solution of alum in water, applied to warts on cattle, will effect a cure in a few days. It is an experiment that will cost but little, and we hope to hear the truth of so simple a theory confirmed.

An English gardeuer made an effigy to frighten birds, and one of the birds regarding it as an accommodatiou, occupied one of the pockets for a nest.

Incendiaries Detected.—Two boys have confessed setting fire to the Fitchville cotton mill which was burnt down last week. The punishment for their offence will be to pass the best part of their lives in the State Prison.—*B. Cul.*

Improvemsnt in File-Cutting.

A few weeks since we published an article on this subject, taken from the Lawrence Courier. The following will be found much more comprehensive, embracing much information not contained in that article :

We were not aware until a few days ago, that the making of a file, an article used by all classes of mechanics, was of so much importance and so much intricacy as it is. We all know that a file is of hardened steel, and that it is made in various shapes, with rough edges of various degrees of coarseness, to adapt it to the quality of the work to which it is devoted, but very few are aware that until now, notwithstanding the inventive genius of ages gone by, and the still more inventive genius of the Yankee nation, all files have been manufactured by hand—that until the present time. no machine has been invented that could accomplish the work of making a file.

A file is a roughed piece of steel, cut in ridges crosswise and transversely, so as to cut or shave off the outside of anything against which it may be rubbed. Heretofore all these ridges or cuts have been made by hand, and the only manufacturers, or cutters, as they are called, have been Englishmen, numbering not more, in the whole, than three thousand. They are, and always have been, a class of men beyond and and above law, dissolute, depraved and drunken, working when and as they pleased, and refusing to extend the knowledge of their trade to others, except as they pleased, and to such number only as they felt disposed.

They have endeavored, and successfully, to keep the business within certain limits and in their own control. The 'Union of File-Cutters' is said to be the richest of any of the Trade Union in Great Britain, and they have been able, in consequence, to demand and obtain their own prices. If their demands have ever been refused, they could from their income, support all turnouts of their trade for a year or more at a a time, without any inconvenience.

The mode of cutting a file is generally by mallet, or hammer and chisel—a movement of the hands similar to that of the sculptor or rough carver, and the operation leaves a sort of rough edge to the ridges which are in this manner turned up. Several machines have been invented for the purpose of cutting files, but although these have succeeded in cutting the ridges in pieces of steel, they have generally failed of accomplishing the desired object,—that of giving to the ridges the rough edge or tooth, which is made by hand power and the use of the chisel. They have cut or pressed regular teeth or ridges, in any desired fashion—cross wise, straight lines, round curves, &c., but the teeth have been invariably smooth, and the files, when manufactured, have been of no more use than a worn out file of the English manufacture.

But we have seen a new invention which will, we think, accomplish the desired object; and make files with all the necessary qualifications. It is a machine now in operation, or soon to be in operation, at the Ballard Vale Machine Shop, by which files can be cut, and when cut, possess all the roughness of the English article. The piece of steel to be cut is placed in a socket, and then carried gradually under a sort of hammer chisel, which moves with a motion similar to that of the toggel joint reversed, and which not only cuts the ridges or teeth, but at the same time turns up the edges so to make them rough, like the teeth of the best English files. The apparatus is very simple, and shows that Yankee ingenuity can overcome almost all obstacles.

New and useful Invention.—While in Chicago last summer, we witnessed, at the machine shop of Mr. P. W. Gates, the opdration of a machine for cutting screws, for which he had just obtained a patent. With this machine, a single boy fourteen years old will cut as many screws in a day as can be cut or rather jamed out in the old way by six men. It is a very simple invention, the very thing that one would have supposed would have been the first thought of in learning how to cut a screw. But every body has looked beyond it, until Mr. Gates became the lucky one to hit upon the idea that will be of great advantage to the public, and for which he will doubtless be amply rewarded.

Mr. Gates informed us that with the power of one man, it will cut bolts as follows :

700 ½ inch bolts per day,
500 ¾ inch do do
400 1 inch do do
300 1½ inch do do

Besides the despatch in doing work, the following are a few other of its advantages over the common die :

1st, its durability, he having cut over 4000 bolts with one die, without any repairs, and it is yet as good as new.

2d, instead of jamming or driving the thread into shape, it cuts it out, the same as in a lathe, leaving the thread of solid iron, which cannot be stripped off as is usual with those cut by the common die.

3d, it will do the work by once passing along the bolt, making the thread perfect.

4th, the die can be made by ordinary workmen with far less expense than the common die, and when made, is not at all liable to get out of repair.

Buffalo Wool Depot.—The January number of the Ohio Cultivator, contains a letter from T. C. Peters, regarding the wool Depot which he has established the past season at Buffalo. He speaks of the experiment thus far having proved successful, and says :

" Many men have come long distances with their wool and staid to see it sorted so that they

could know which kind of wool would be the most profitable to grow, and after a careful examination, they have gone away with knowledge that was worth hundreds of dollars to them; because shey knew exactly what they wanted to improve their flocks. Others, again, have been able, by an examination of the wool here, to find the kind and quality that exactly suited their case, and be desirable to introduce into their flocks; and thus exchanges have been effected that were very beneficial, which could not have been, but for the depot.

GENERAL INTELLIGENCE.

Congress.—But little has been accomplished as yet, though some important discussions have beed had. In the Senate, Mr. Mangum, of N. Carolina, offered a resolution, calling on the President to inform Congress whether the order promulged by General Scott which looked to the accupation of all Mexico, had its origin with the war department, and also what were the plans of the President in relation to the prosecution of the war. This resolution called forth a warm debate. General Cass is reported to have said, that "the United States could swallow the whole of Mexico and not hurt herself." Mr. Butler of S. Carolina, while the debate upon the ten regiment bill was pending, asked what we had gained by our victories except a crop of heroes? He said Mexico had a right to complain of the exorbitant demands we made upon her, and condemned the hasty movement of our troops from Corpus Christi into the disputed territory as having given origin to hostilities. Mr. Jefferson Davis, of Mississippi, said the Mexican troops had probably crossed the Rio Grande, and had invaded the debatable ground before General Taylor had marched from Corpus Christi—certainly before he had placed his foot upon the disputed ground.

Legislature of Michigan.—As no important results have yet been reached in our Legislature, we have nothing of interest to chronicle from that quarter. The bill introduced by Hon. J. D. Pierce, exempting the homestead from seizure and execution, is the most important one brought forward. A similar bill is before the Legislature of Ohio.

A disease called by some, the spotted fever, is prevailing with considerable fatality in many parts of Michigan, particularly in Shiawassee County.

The deaths from the bursting of the boilers of the A. N. Johnson on the Ohio, were over a hundred instead of seventy, as reported.

Foreign.—Breadstuffs are rather on the rise in England. Disturbances continue in Ireland, and famine again stalks through that ill-fated Island. The Sandwich Islands appear to be in a prosperous state, so far as trade is concerned, the imports at Honabula the past year being $516,174, while the exports amounted to $997,-333. Receipts into the treasury the past year $127,000, disbursements $115,571. The Minister of the interior reports many interesting facts in relation to the prosperity of the Howaian Islands. The cultivation of the soil, and commercial operations are increasing, while the consumption of intoxicating drinks is decreasing.

Democratic State Conventions in Ohio and Indiana, have appointed Cass delegates to the National Convention to be held at Baltimore.—The Ohio Whig State Convention has appointed delegates to the Whig National Convention, and passed resolutions sustaining the course taken by Senator Corwin.

Mexico.—Orders have been issued by Gen. Scott, preparatory to spreading the army over Mexico, with a view to the occupation of the entire country. The report of Gen. Scott's recall has been confirmed and contradicted some half a dozen times. The last version of the matter is, that Gen. Towson had actually started for Mexico, where he and two other Generals in Mexico were to constitute a Court Martial to try the commander-in-chief. Pillow and Duncan are also to be tried. By the last steamer news came that despatches had arrived from the capital at Vera Cruz, supposed to contain proposals from the British Minister for peace.

The panic in regard to the New York banks has nearly subsided. It is said to have been got up by interested individuals. One broker is said to have cleared five thousand dollars in one day by shaving the notes.

The number of convicts in the State's Prison in this State, is 119. Receipts $18,329 63, expenditures $18,000 42, for the thirteen months since last report.

An attempt has been made to burn the congregational church at Jackson, in this State, and the sum of five hundred dollars has been raised by the citizens, and offered as a reward for the discovery of the perpetrator.

Hayti is reported to be again on the eve of a revolution.

The Steamboat Blue Ridge blew up recently on the Ohio, with a terrible explosion. Twenty to forty lives lost, passengers mostly from Kenawha and Gallipolis.

The Planter burst her boilers recently on the Illinois, by which five persons were killed.

The Telegraph West is completed as far as Jackson.

The great case of Mrs. Gaines, wife of Gen. Gaines, has been finally decided in her favor, by the U. S. Court at Washington. By this decision Mrs. G. comes in possession of an estate valued at over $20,000,000, embracing some of the most valuable parts of the city of New Orleans, and large tracts in various parts of the Union.

XUM

A dollar well laid out.—It is refreshing to receive such testimonials as the following:

WAYLAND, Jan. 15, 1848.

MR. EDITOR,—Enclosed is the subscription price of your paper, which you will please pass to my credit. I consider it the most valuable paper a young farmer in this country, with small means, can obtain.

Very truly yours,

A. P. BROWNSON.

"*A farmer with small means.*"—Such a farmer generally pleads poverty as an excuse for not taking an agricultural paper. He must wait till he gets out of debt. Our friend Brownson would tell him, that he might as well put off sending for a physician, till he is so far recovered, that he can get along very well without him.—No, no, that is not the way. How can a farmer who hardly knows which way to turn, more economically expend his scanty means, in preparing himself to carry on his business successfully, than to pay a dollar for an agricultural paper, when by so doing he can bring to his aid the results of the accumulated experience of the most successful farmers in the world!

REPLY TO AN INQUIRY.—We have received a letter from our old friend Col. Barnes, of Allegan county, in which he takes occasion to pass a high compliment upon the Farmer, and what is better than words, he encloses the pay for two copies for the current year—a good example.

In reply to the inquiry he makes in regard to the practicability of procuring apple seeds in this city, we would say, that we can find none here. A seed depot is greatly needed at this point, and there will be one in the Spring.

To POSTMASTERS.—We tender our thanks to the postmasters generally, for the kind interest they appear to take in the Farmer. Should there be any copies of the Farmer which have not been taken since the year commenced, they will do us a favor by returning them to the office, as we want them for new subscribers.

SOMETHING EXTRA.—We very much doubt whether editor was ever more fortunate than are we so far in the hand-writing of our correspondents. We defy any counting-house in this city to turn out a handsomer specimen of penmanship, than is displayed by that same "Woodchopper"—that same "Root Cultivator," and "Otisco" are not far behind. The compositors bless them.

☞ It is encouraging to see our agricultural friends stepping forward as correspondents.—May their number be multiplied an hundred fold. We hope to hear from them often.

AGENTS WANTED.—Some ten or twelve more young men, who can bring good recommendations, are wanted immediately, to act as traveling agents for the Farmer.

☞ The President of the Massachusetts Horticultural Society at its late annual fair, laid on its table, one hundred and sixty sorts of pears, fom *one* garden.

A swarm of bees contains from ten thousand to twenty thousand in a natural state, and from twenty thousand to forty thousand in a hive.

One of the best and cleanest remedies for sore heads, fly blows, &c in sheep, is the dregs of whale oil, mixed with sulpher, and put on with a brush.

BACK VOLUMES OF THE FARMER.

Volumes IV and V, neatly put up in pamphlet form, for sale at 50 cents a volume. They can be forwarded by mail or otherwise, as may be directed. Address H. Hurlbut, Detroit.

TERMS.—The MICHIGAN FARMER is published at Detroit, twice a month, by WARREN ISHAM, at one dollar a year in advance—after three months $1 25—after six months $1 50—after nine months $1 75. No subscription taken for less than one year, nor discontinued till all arrerages are paid. To clubs, five copies for four dollars.

Office, on King's corner, third story.

Market Intelligence.

DETROIT PRICE CURRENT.

Flour, bbl.	$4 75a$		Salt,	$1 75 a$	
Corn, bus.	37½a	40	Butter,	12 a	14
Oats,	22 a	24	Eggs, doz.	14	
Rye,	31¼a	35	Hides, lb.	3 a	7
Barley,	34 a	37	Wood, cord,	2 25 a 3	00
Hogs, 100 lbs.	3 00 a 3	25	Wheat, bus.	75 a	80
Apples, do	25 a	50	Hams, lb.	6 a	6½
Potatoes,	35 a	44	Onions, bu.	41 a	50
Hay, ton,	8 00 a 10	00	Cranberries,	75 a 1	00
Wool, lb.	22 a	28	Buckwheat 100 lbs.	1	25
Pig iron, ton,	31 00 a34	00	Indian meal, "		75
Coal, Leh.	11 00 a13	00	Beef, do	2 00 a 3	00
do Ohio,	4 00 a 5	00	Lard, lb. retail,		08
Peas, bu,	37 a	38	Honey.		12½
Beans,	75 a	80	Apples, dried,	1	75
Beef, bbl.	8 00 a11	00	Peaches, do	a 2	50
Pork,	10 00 a13	00	Clover seed, bu.	4	00
White fish,	6 00 a 7	00	Herd's grass do do	1	00
Trout,	5 50 a 6	00	Flax do		75
Cod fish, lb.	5 a	5¾	Lime, "		75
Cheese,	6 a	7½			

FURS.

R'coon p'me large,	44 a62½	Red Fox no 1	1 25	
do do small,	31 a50	Grey do no 2	37½	
do no 2	12 a25	Wild cat no 1	37½a50	
Mink no 1	37½a50	do 2	25 a30	
M'sk rat p'me	9 a10	Otter no 1	3 00 a3	50
do no 2	6 a7	Martin no 1	1 12 a1	25
Deer red per lb	16 a18¾	Fisher no 1	1 25 a1	75
do grey do	10 a12½	Bear no 1	3 00 a4	00

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